Graphics, Media, and Games Kickoff

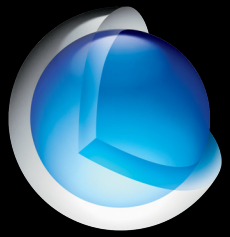
Session 400

John Stauffer
Senior Director
Interactive Media Group

These are confidential sessions—please refrain from streaming, blogging, or taking pictures

OpenGL
OpenGL ES
OpenAL
OpenCL
H.264
AAC
AV Foundation
ColorSync
ProRes

OpenGL



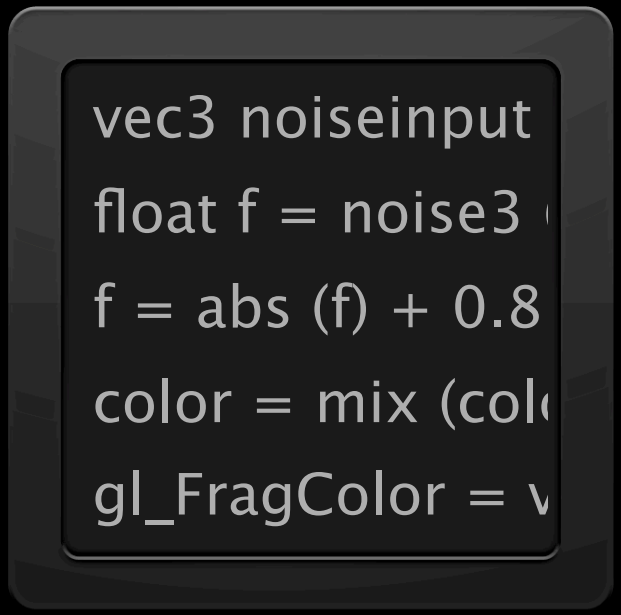
OpenGL|ES

AV Foundation

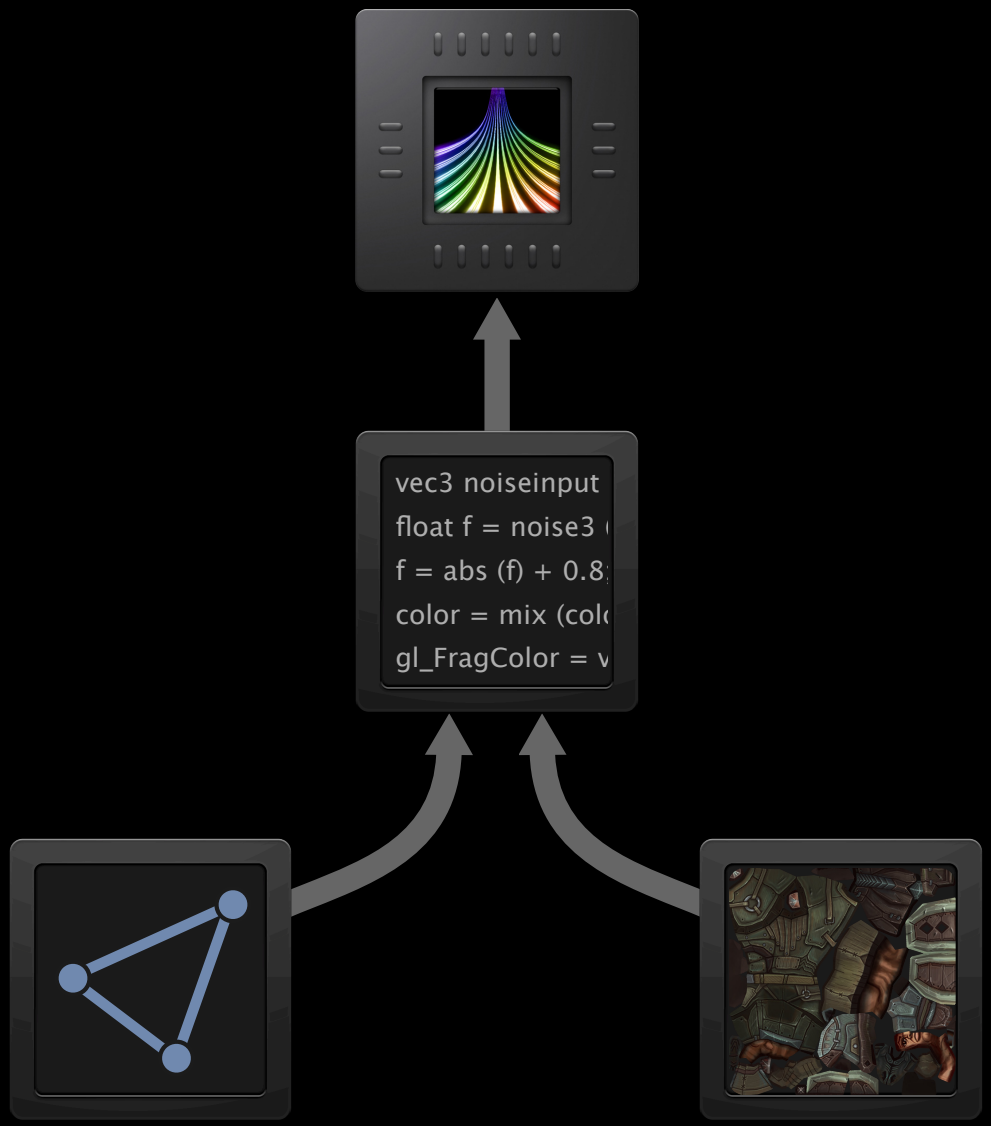
openAL

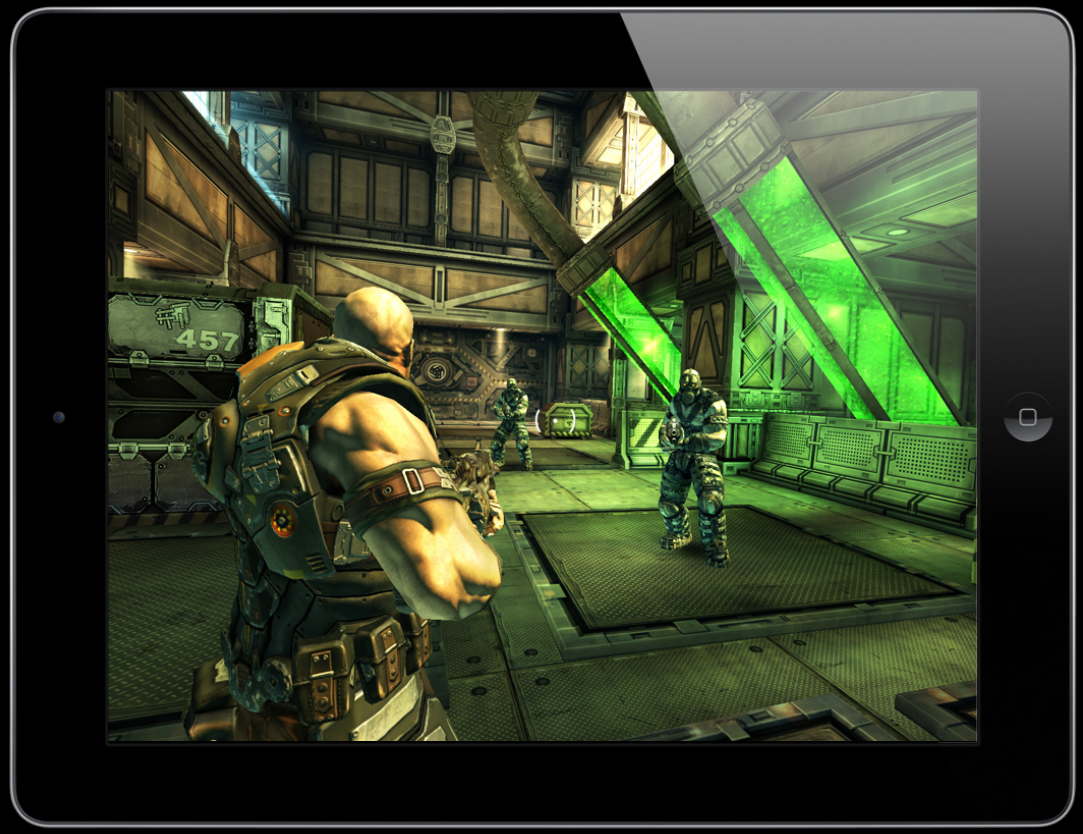
OpenGL

OpenGES™



Graphics Shaders


vec3 noiseinput
float f = noise3
f = abs (f) + 0.8
color = mix (col
gl_FragColor = v



Amazing Visuals

Demo

SHADOWGUN

Geoff Stahl
Director
Interactive Media Group

Shaders Everywhere

Performance

Graphics Processor

Correctness

5

OpenGL ES Tools

OpenGL ES Performance Detective

OpenGL ES Analyzer Instrument

OpenGL ES Debugger

Built into Xcode

Demo

OpenGL ES Developer Tools

Geoff Stahl
Director
Interactive Media Group

GL Kit

UIKit integration

Fast math library

Easy texture loading

Effects library

EXTENSIONS

Half float color buffers

Improved shadow sampling

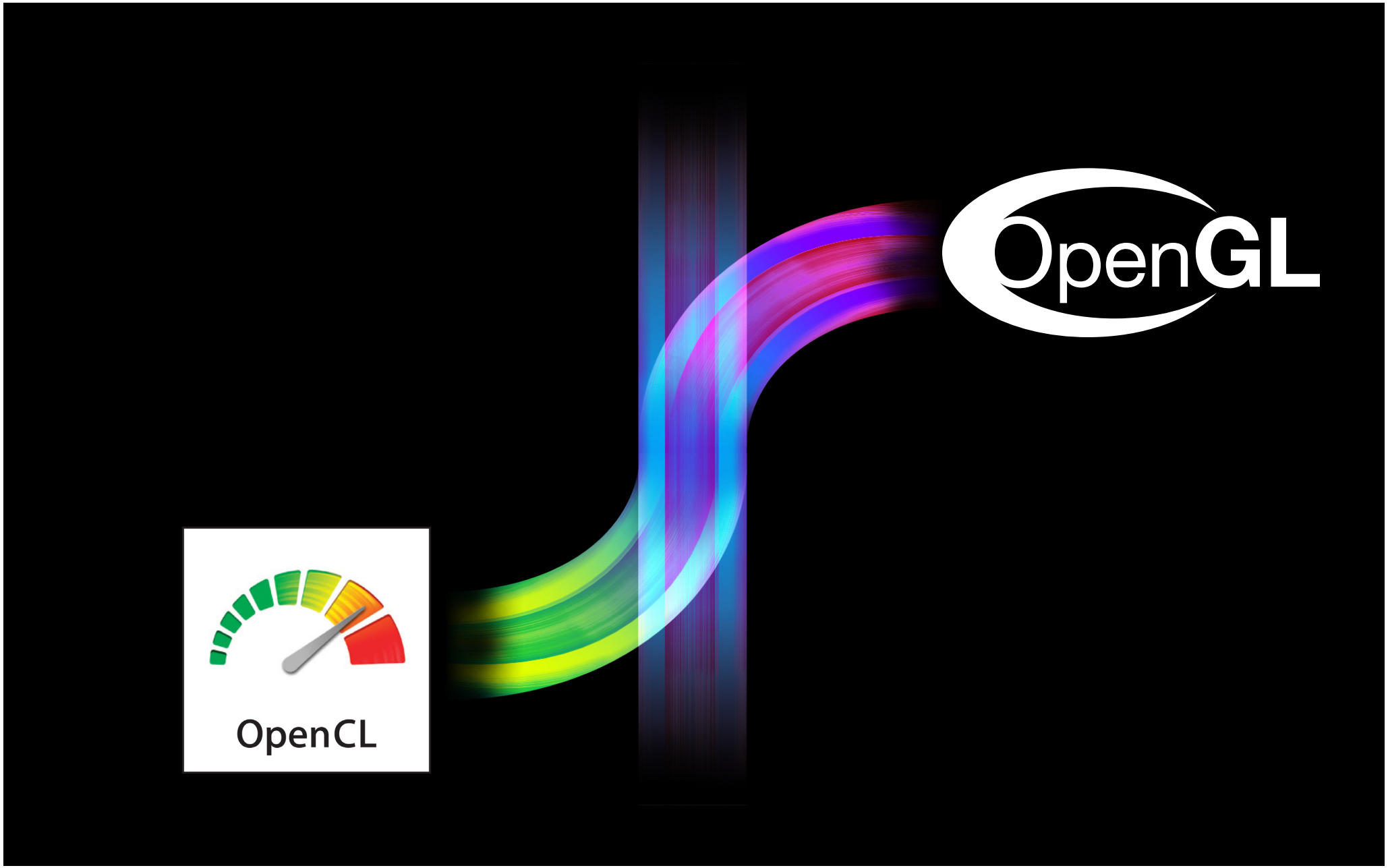
Linear float texture sampling

Separate shader objects

Boolean occlusion query

OpenGL

CORE PROFILE

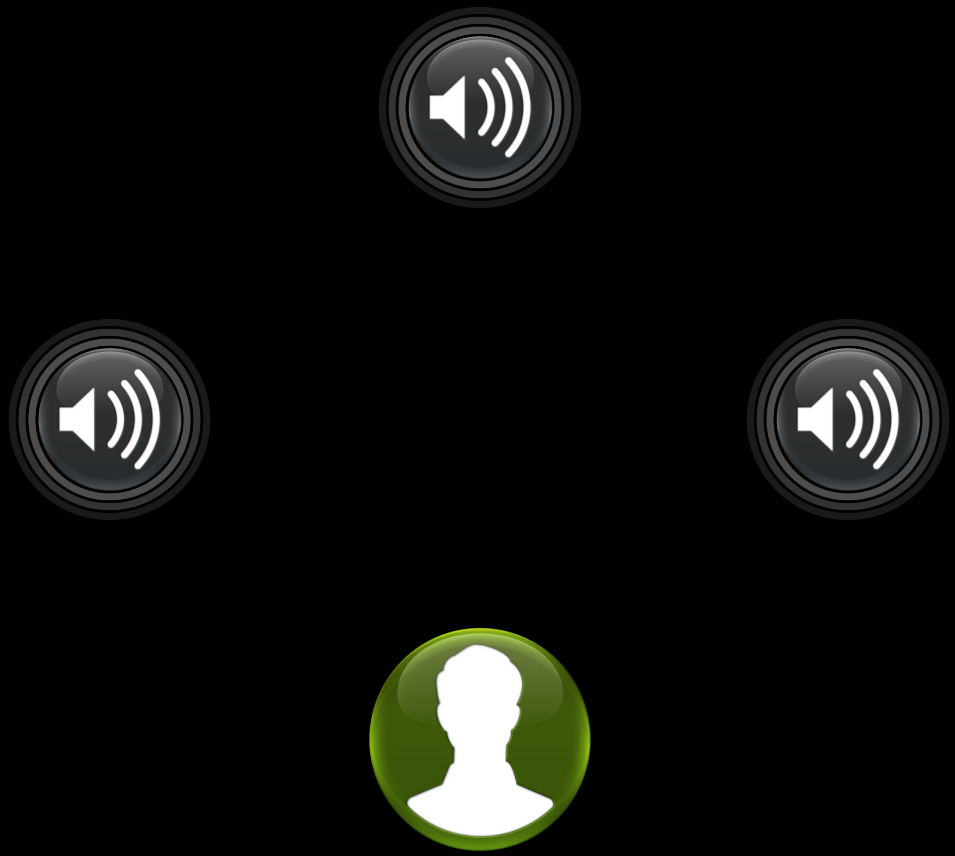

OpenGL
OpenCL

OpenGES™

OpenAL

OPENUAL

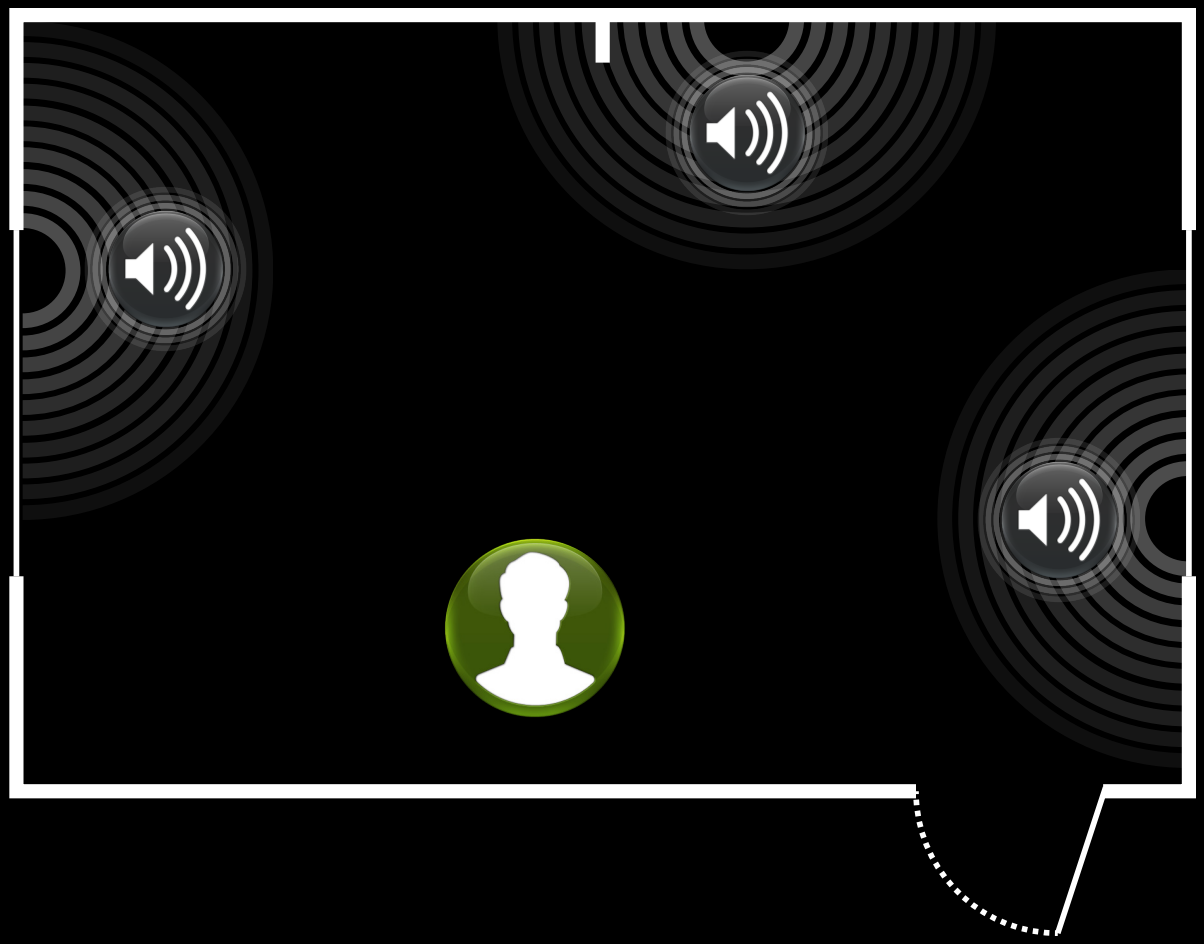
Spatial Audio



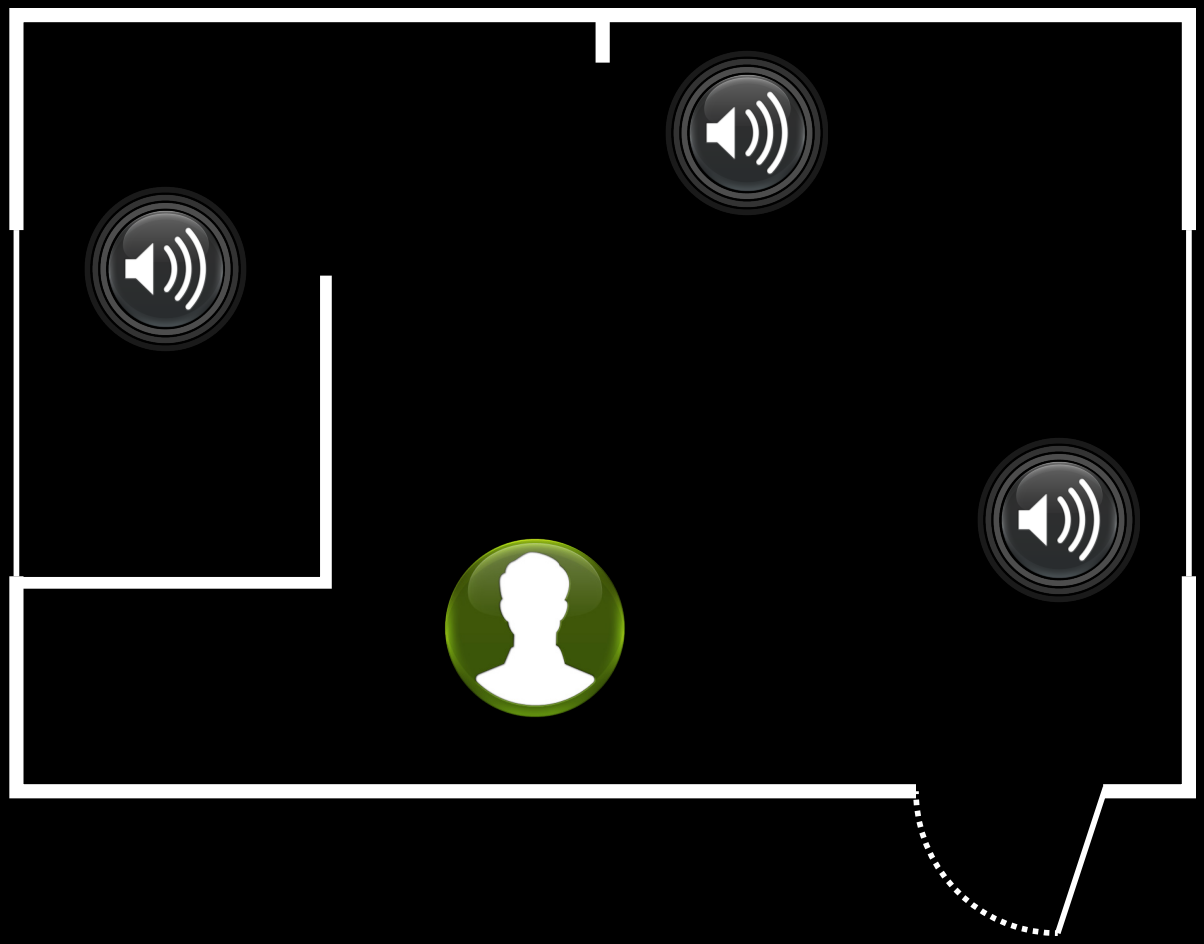
OpenAL

EXTENSIONS

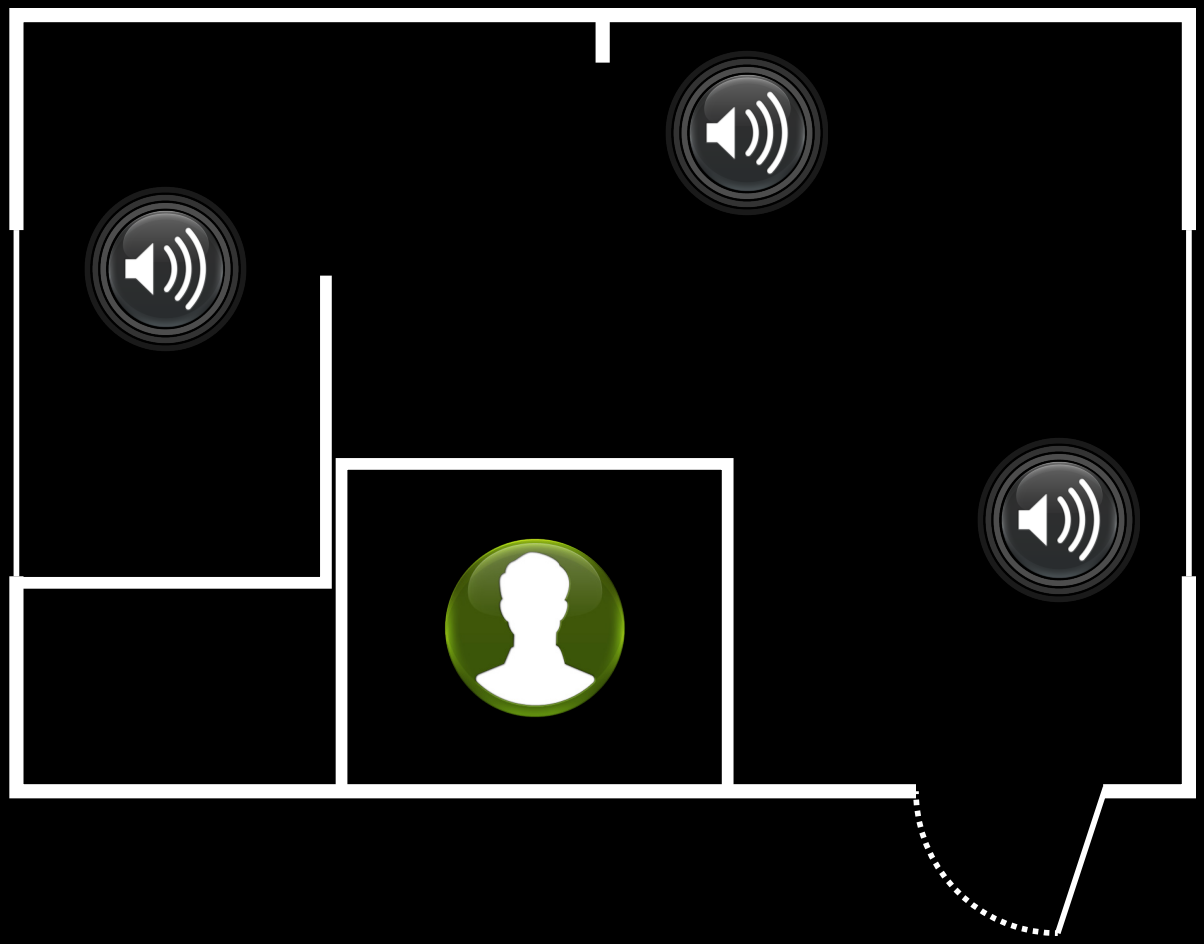
Reverb

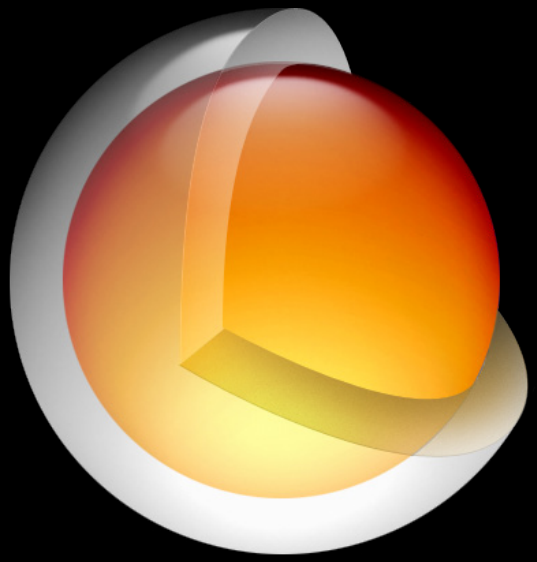


Obstruction



Occlusion





Core Audio

OPENUAL

Game Center

Game Center

50 Million

Users

Game Center
App

GameKit
Framework

Game Center
Services

Friends

Leaderboards

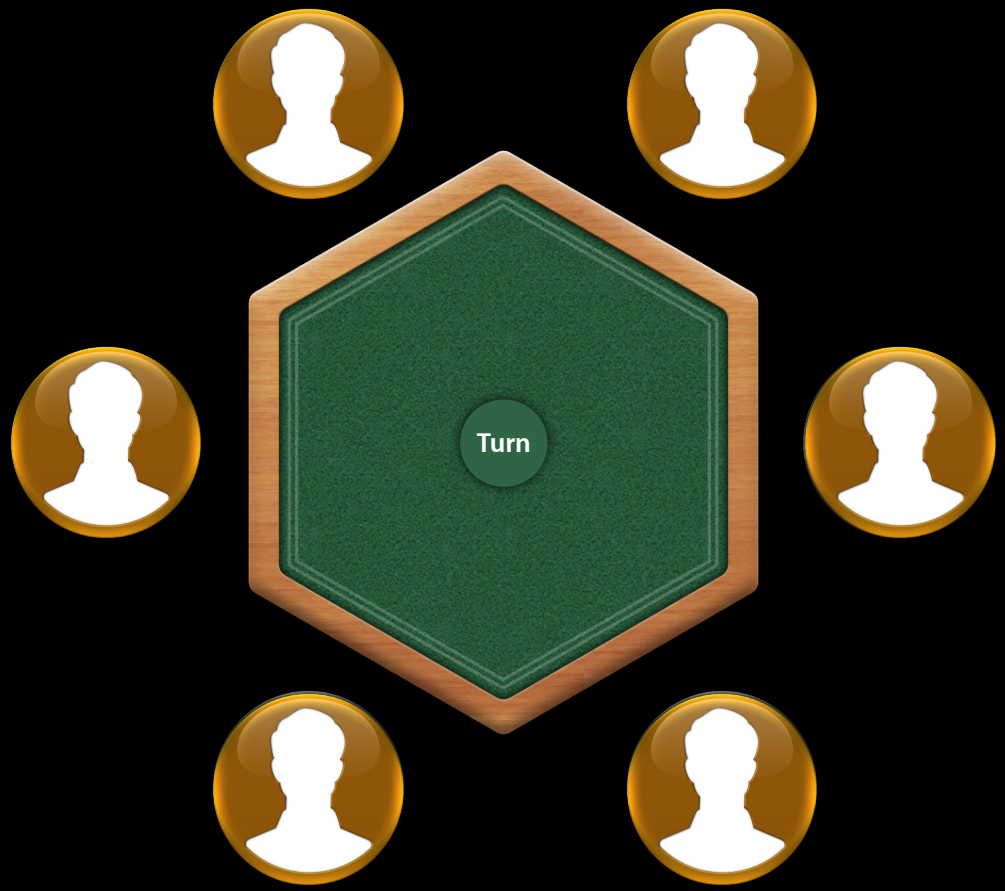
Achievements

Multiplayer

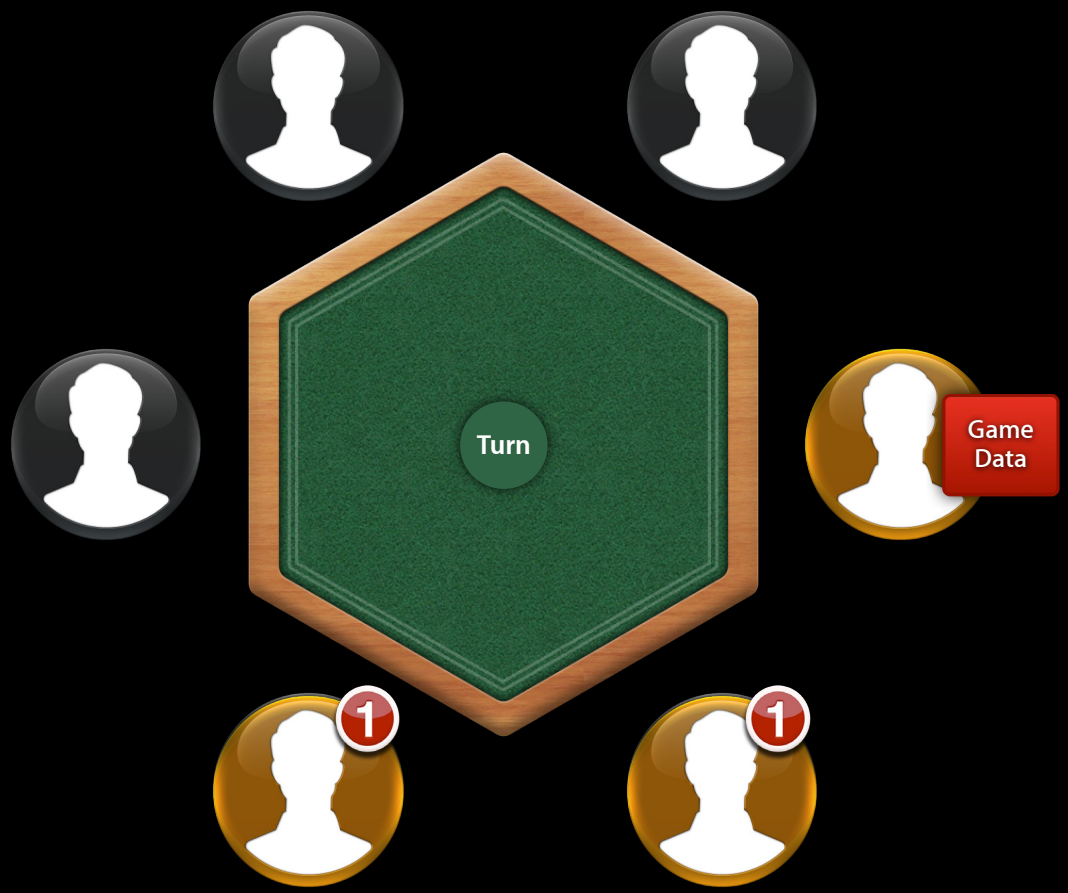
Voice chat

Customization

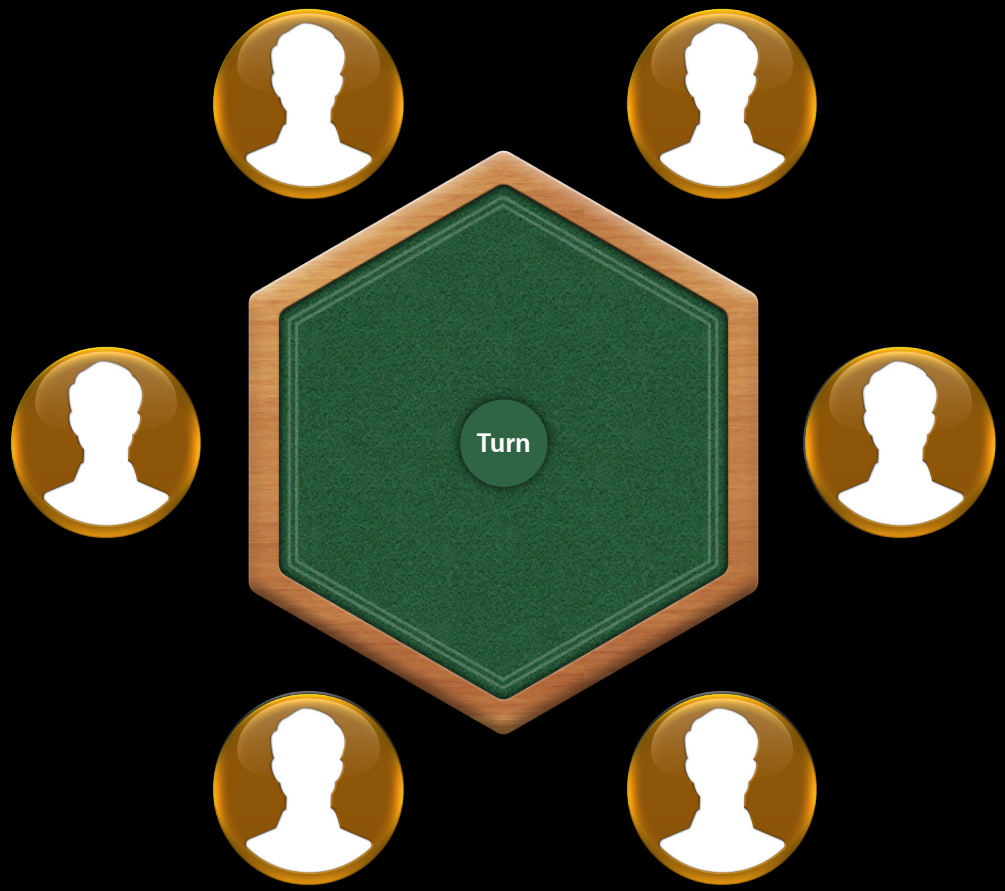
Turn-based Multiplayer



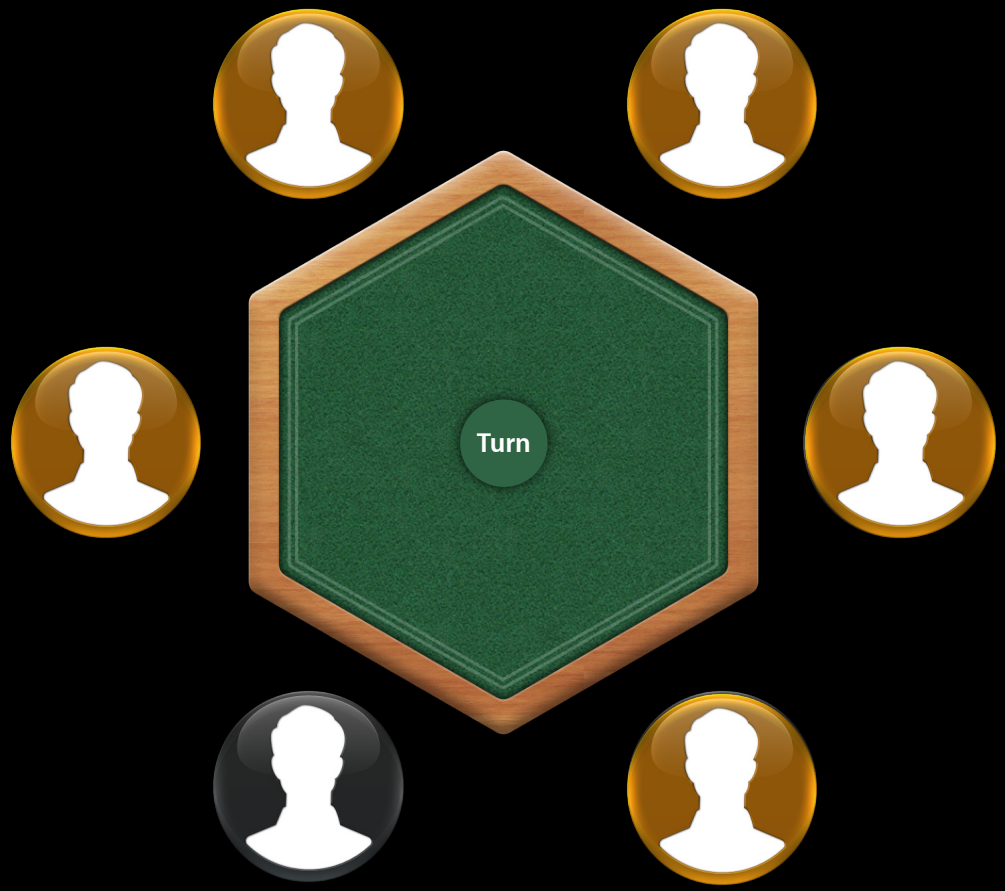
Turn-based Multiplayer



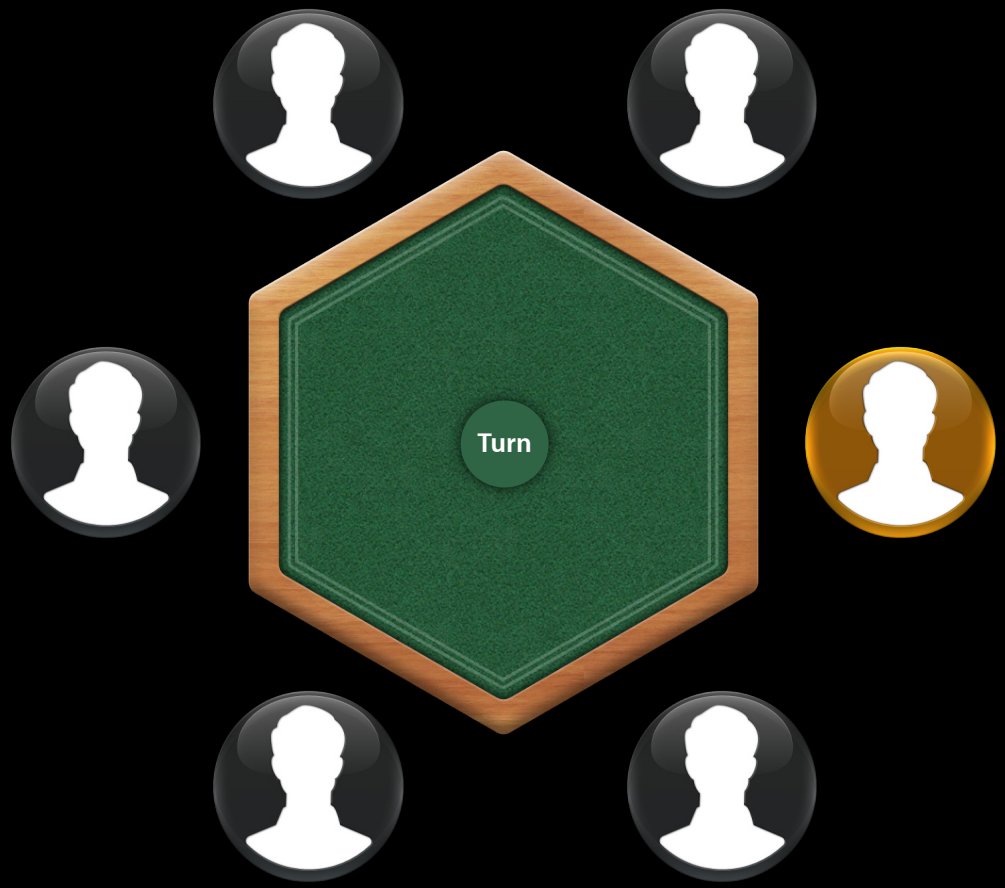
Turn-based Multiplayer



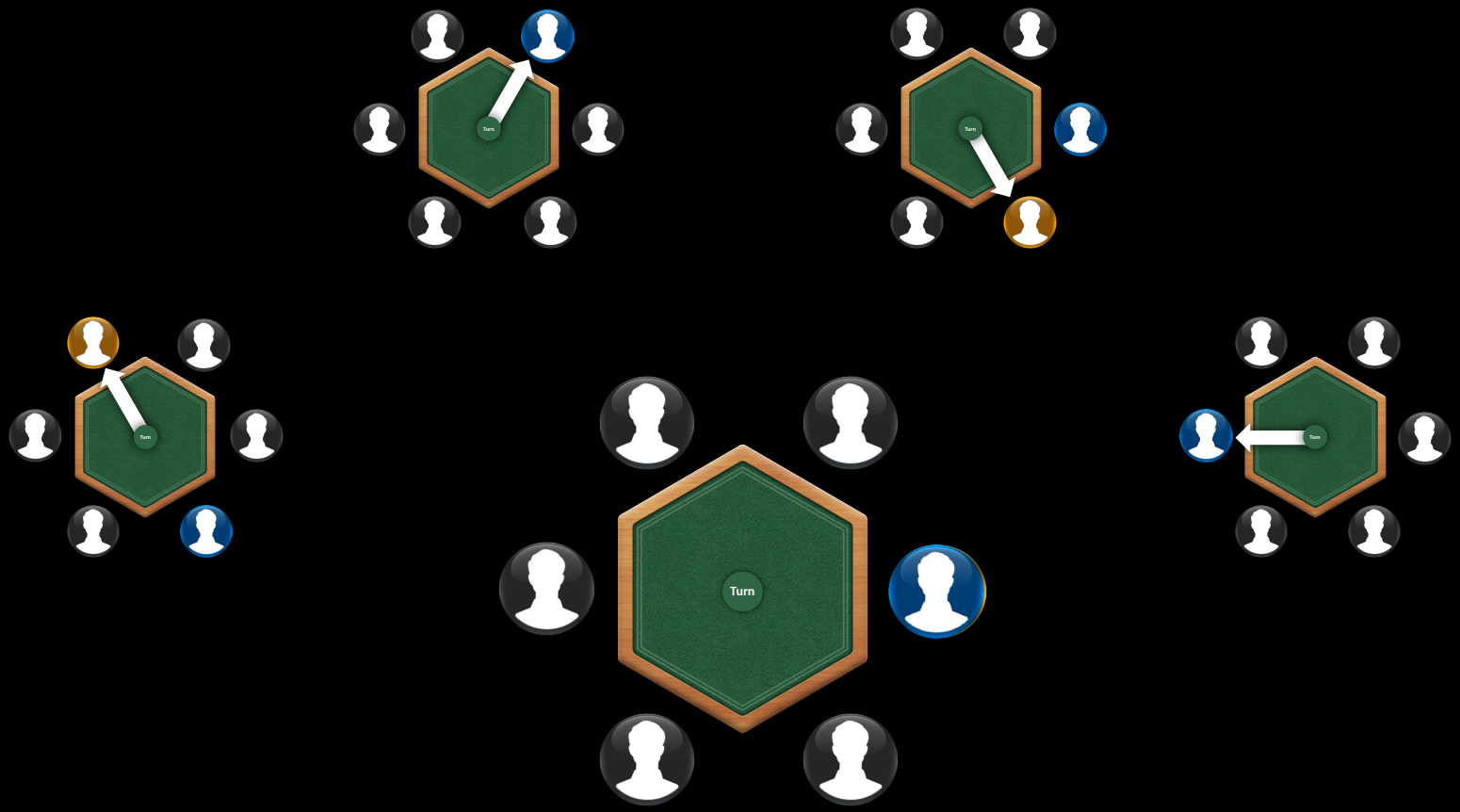
Auto-matching



Control of Next Turn



Multiple Matches



Multiple Matches

Demo

Word for word

meriko borogove
Director
Interactive Media Group

Achievement banners

Custom invite sounds

App store ratings in-game

Achievement leaderboards

Game recommendations

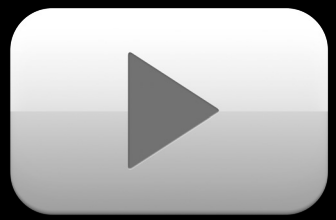
Friend recommendations

Player photos

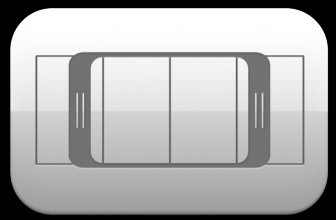
AV Foundation

AV Foundation

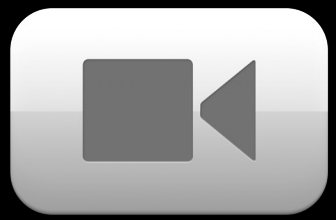
5



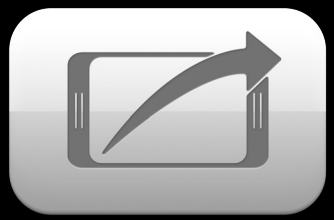
Playback



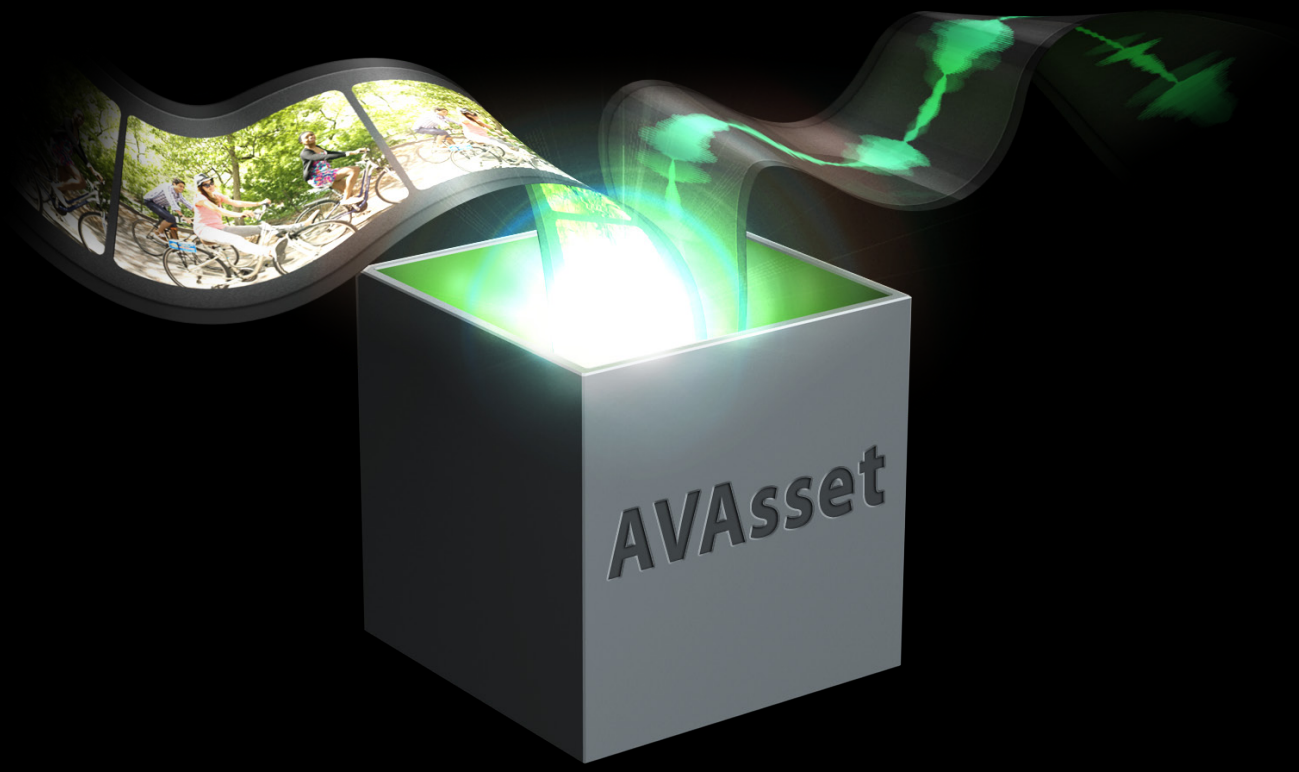
Edit



Capture



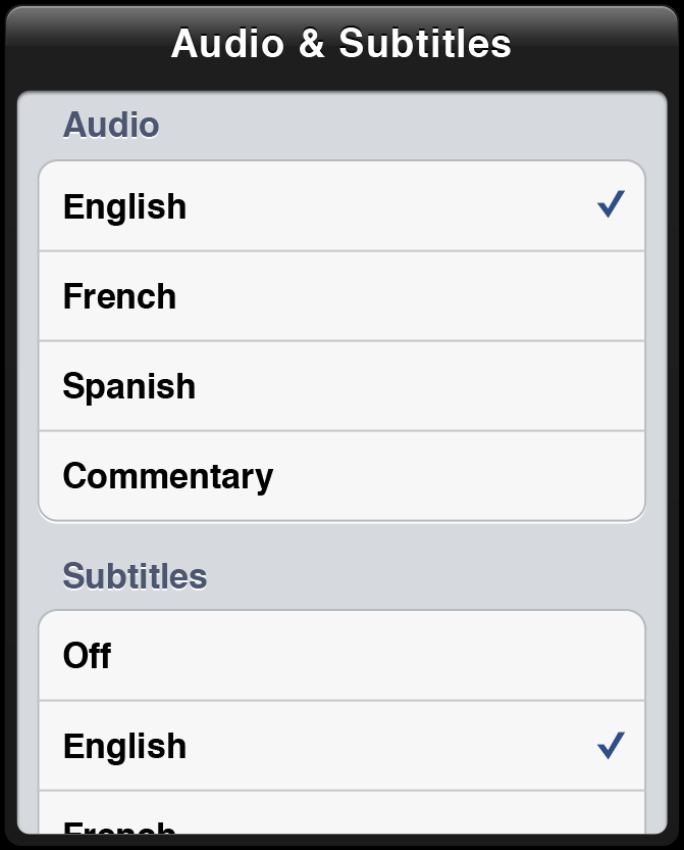
Export



AVAsset

Playback

3G
9:41 AM
Done
01:19:21
-01:02:12

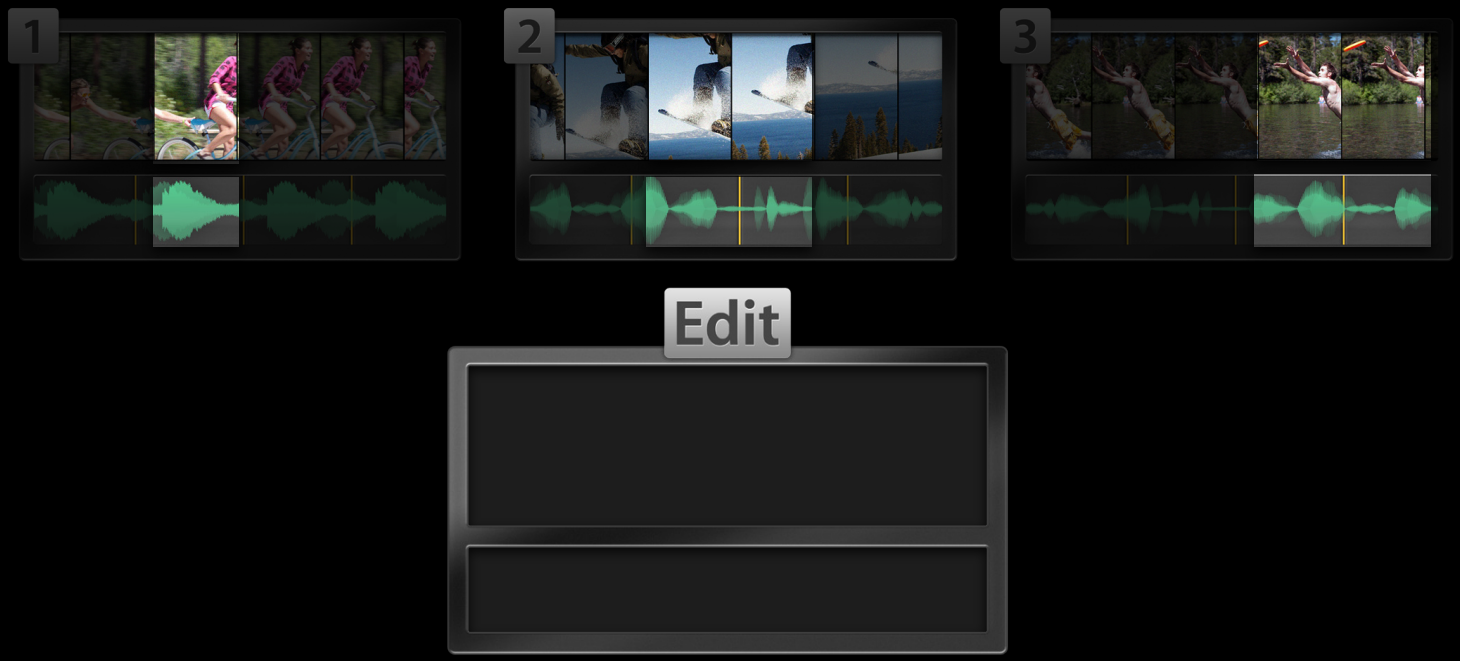


Media Options

iPad
9:41 AM
Rentals
26 Days Left
Info
Chapters
The Coffee Shop (2011)
R, Appleseed, 2011 HD
Chapter 1
00:00
Chapter 2
05:33
Chapter 3
10:05
Chapter 4
17:46
Chapter 5
26:00
Chapter 6
34:35
Chapter 7
THE COFFEE SHOP
danielle BISHOP
jacob KENNEDY

Chapters

Editing



Editing

Editing

Editing

Capture

Core Media
IO

Export

H.264

ProRes

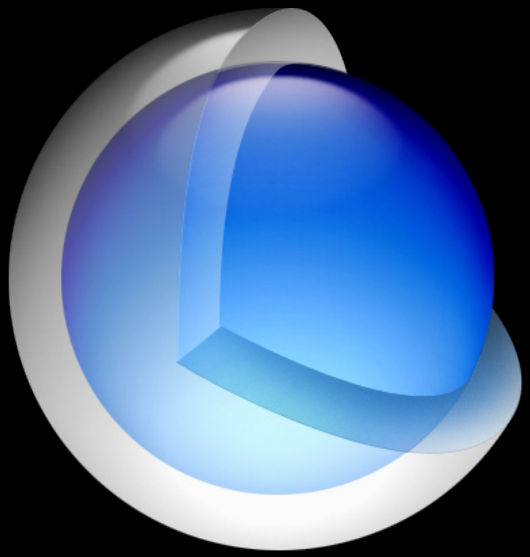
AAC

AVAsset Read and Write

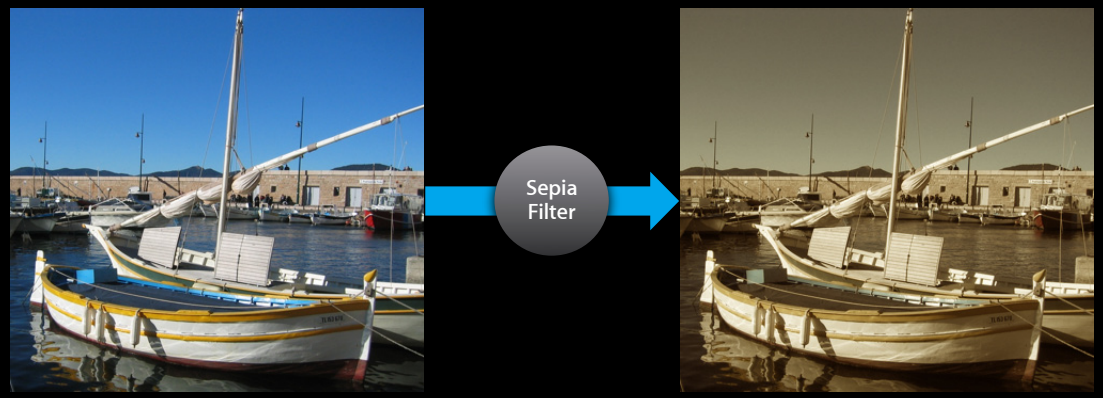
AVVideoCompositionInstruction
AVURLAsset
AVPlayerItemTrack
AVPlayerLayer
AVMediaSelectionGroup
AVCaptureVideoPreviewLayer
AVCaptureVideoDataOutput
AVMutableAudioMixInputParameters
AVAssetTrackSegment
AVComposition
NSCoder AV Foundation Additions
AVMutableMetadataItem
AVCompositionTrackSegment
AVCaptureStillImageOutput
AVAssetImageGenerator
AVAsset
AVTimedMetadataGroup
AVAssetWriter
AVAssetTrack
AVAudioPlayer
AVMutableComposition
AVCaptureAudioDataOutput
AVAudioRecorder
AVPlayer
AVPlayerItem
AVCaptureDevice
AVMetadataItem
AVAssetReader
AVMutableCompositionTrack
AVCaptureConnection
AVMediaSelectionOptions
AVMutableVideoComposition
AVAudioMix
AVAssetExportSession
AVMutableAudioMix
AVCaptureSession
AVMutableVideoCompositionLayerInstruction
AVMutableVideoCompositionInstruction
AVCaptureInput
AVSynchronizedLayer
AVCaptureFileOutput
AVAudioMixInputParameters
NSValue AV Foundation Additions
AVCaptureMovieFileOutput
AVAudioSession
AVCaptureFileOutput
AVVideoComposition
AVCompositionTrack

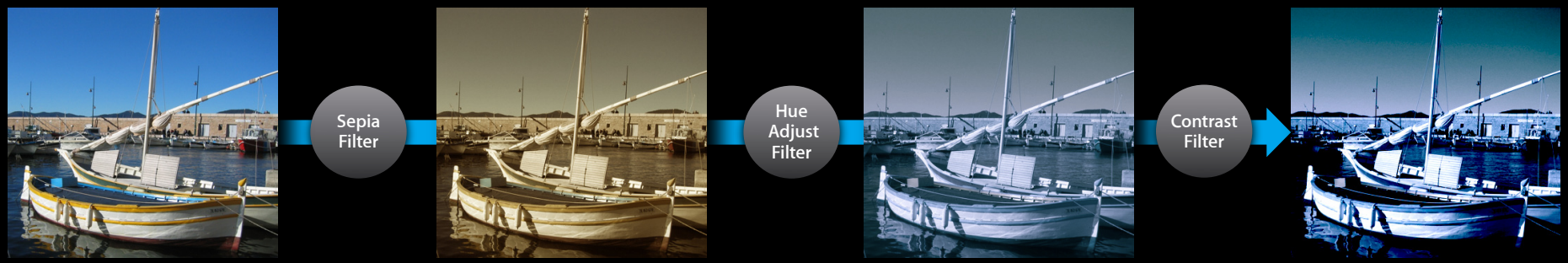
AV
Foundation

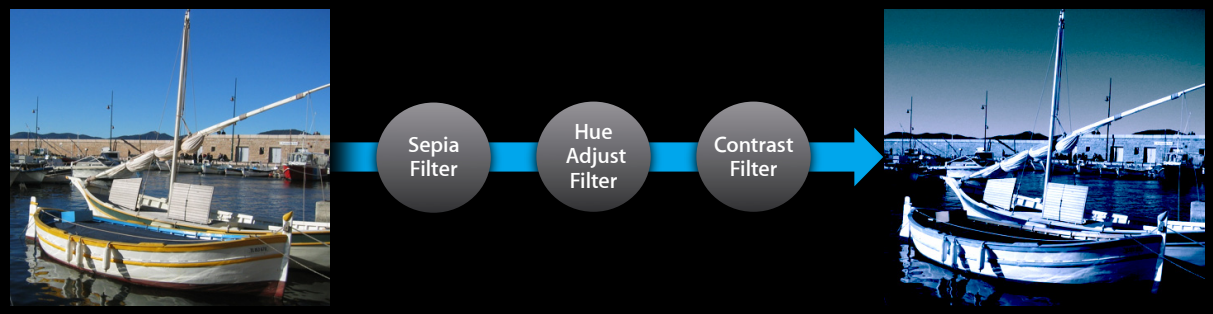
Core Image

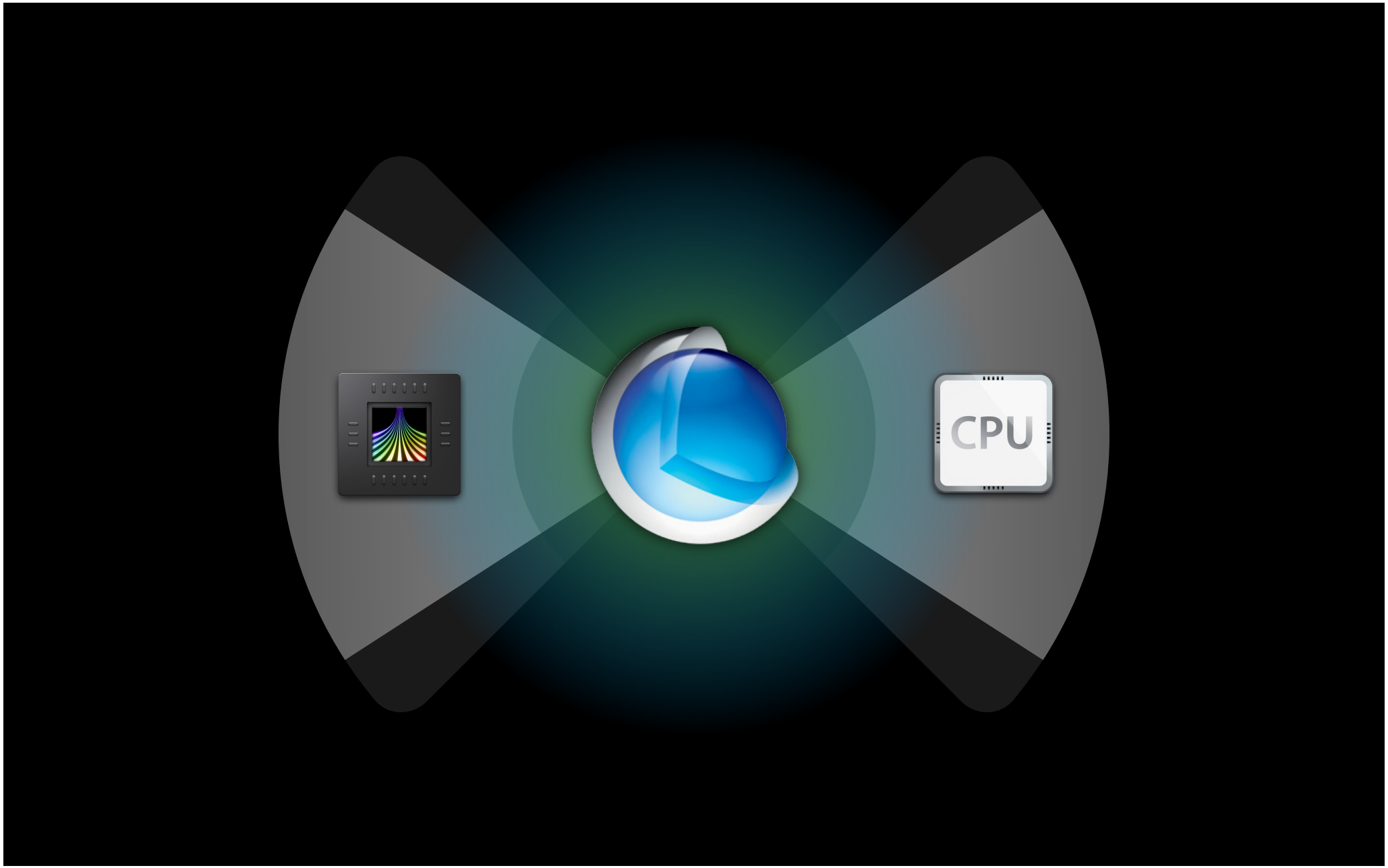


Core Image


Sepia
Filter


Sepia Filter
Hue Adjust Filter
Contrast Filter


Sepia Filter
Hue Adjust Filter
Contrast Filter


CPU

CIConstantColorGenerator

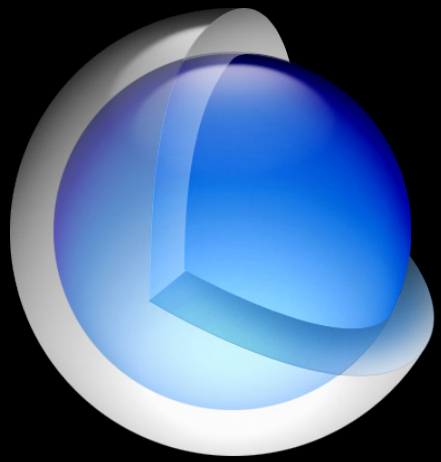
CIHighlightShadowAdjust

CIColorControls

CIWhitePointAdjust

CISourceOverCompositing

CISepiaTone



CIHueAdjust

CIColorMatrix

CICrop

CIVibrance

CIAffineTransform

CIStraightenFilter

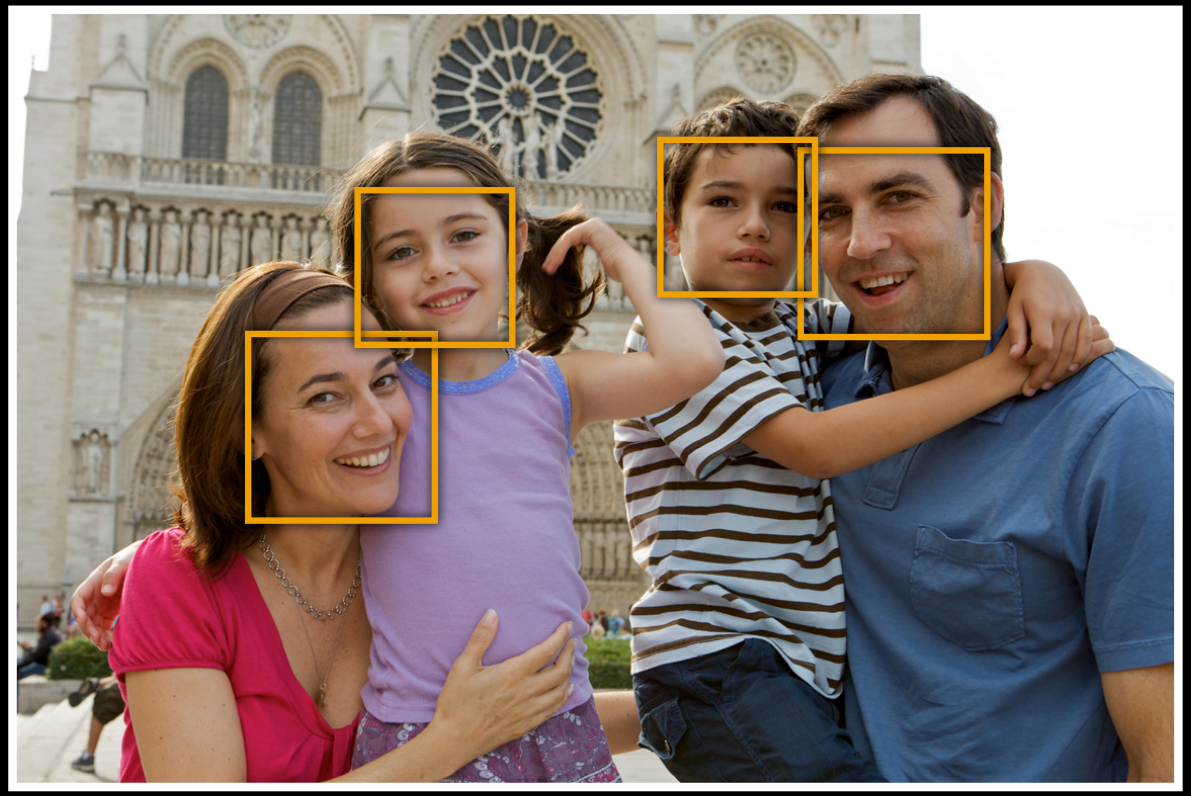
CIGammaAdjust

CITemperatureAndTint

CIExposureAdjust

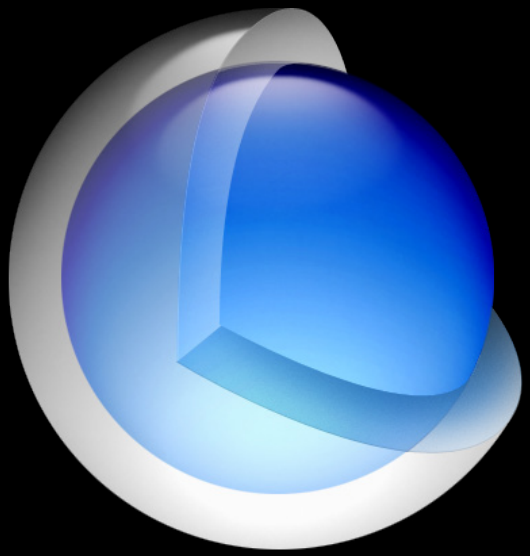
CIToneCurve

Auto Enhance

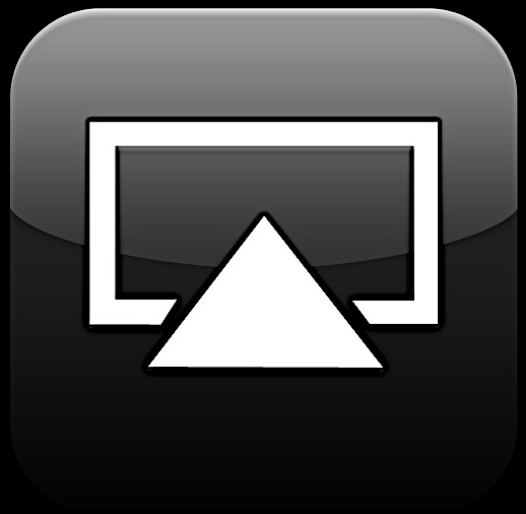


Face Detection

Red-eye Reduction



AirPlay



AirPlay

Stream Audio

Stream Video

Mirror Everything to a TV

Wirelessly Mirror Everything to Apple TV

Second Display

Demo

Real Racing 2 HD

Geoff Stahl
Director
Interactive Media Group

MediaPlayer

Mirroring

Routing

HTTP Live Streaming

UIScreen

Multitasking

Second Display

Remote Control

NowPlayingInfoCenter

AVFoundation

Integration

Demo

Integration

meriko borogove
Director
Interactive Media Group

OpenGL
OpenGL|ES
OpenAL
OpenCL
H.264
225 Sessions
AAC
AV Foundation
ColorSync
ProRes

WWDC2011